

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method for memory failure recovery in a computer, comprising:  
2 maintaining a predetermined number of duplicate and primary processes in the computer;  
3 keeping the processes in synchronization;  
4 managing the processes so that a single process image is presented to an external  
5 environment;  
6 detecting a computer ~~system~~ exception which affects one of the processes; and  
7 terminating the affected process.
- 1 2. (Original) The method of claim 1 wherein the detecting element includes detecting a  
2 memory failure.
- 1 3. (Currently Amended) The method of claim 1 further comprising:  
2 allocating a new memory space in memory hardware in the computer to each of the  
3 duplicate processes, which is separate from a memory space in the memory hardware allocated  
4 to the primary process.
- 1 4. (Original) The method of claim 1 wherein the maintaining element includes:  
2 identifying a primary process;  
3 monitoring a fault-tolerance value corresponding to the primary process; and  
4 setting a number of duplicate processes equal to the fault-tolerance value.
- 1 5. (Currently Amended) The method of claim 4 further comprising ~~wherein the monitoring~~  
2 ~~element includes~~ assigning a predetermined fault-tolerance value to a primary process.

1 6. (Currently Amended) The method of claim 4 further comprising ~~wherein the monitoring~~  
2 ~~element includes~~ dynamically modifying the fault-tolerance value of the primary process, in  
3 response to a computer command.

1 7. (Currently Amended) The method of claim 4 wherein the setting element includes  
2 adding ~~[[a]]~~ one or more new duplicate processes, if the number of duplicate processes is less  
3 than the fault-tolerance value.

1 8. (Original) The method of claim 4 wherein the setting element includes deleting a  
2 duplicate process, if the number of duplicate processes is more than the fault-tolerance value.

1 9. (Original) The method of claim 1 wherein the keeping element includes synchronizing  
2 the processes upon receipt of data from an external environment.

1 10. (Original) The method of claim 1 wherein the keeping element includes synchronizing  
2 the processes upon receipt of signals from an external environment.

1 11. (Original) The method of claim 1 wherein the keeping element includes synchronizing  
2 the processes upon transmission by one of the processes to an external environment.

1 12. (Original) The method of claim 1 wherein the managing element includes permitting  
2 only one of the processes to transmit to an external environment.

1 13. (Original) The method of claim 1 wherein the managing element includes permitting  
2 only one of the processes to perform a system call to an external environment.

1 14. (Original) The method of claim 1 wherein the managing element includes permitting  
2 only one of the processes to perform a library call to an external environment.

1 15. (Original) A method for memory failure recovery, comprising:  
2 maintaining a predetermined number of duplicate and primary processes;  
3 keeping the processes in synchronization;  
4 managing the processes so that a single process image is presented to an external  
5 environment;  
6 detecting a computer system exception which affects one of the processes; and  
7 terminating the affected process;  
8 wherein the maintaining element includes,  
9 identifying a primary process;  
10 monitoring a fault-tolerance value corresponding to the primary process; and  
11 setting a number of duplicate processes equal to the fault-tolerance value; and  
12 wherein the managing element includes,  
13 permitting only one of the processes to perform a system call to an external  
14 environment.

1 16. (Cancelled)

1 17. (Currently Amended) A computer-usable medium embodying computer program code  
2 for commanding a computer to perform memory failure recovery comprising:  
3 maintaining a predetermined number of duplicate and primary processes in the computer;  
4 keeping the processes in synchronization;  
5 managing the processes so that a single process image is presented to an external  
6 environment;  
7 detecting a computer system exception which affects one of the processes; and  
8 terminating the affected process.

1 18. (Original) The medium of claim 17 wherein the detecting element includes detecting a  
2 memory failure.

1 19. (Currently Amended) The medium of claim 17 further comprising:  
2 allocating a new memory space in memory hardware in the computer to each of the  
3 duplicate processes, which is separate from a memory space in the memory hardware allocated  
4 to the primary process.

1 20. (Original) The medium of claim 17 wherein the maintaining element includes:  
2 identifying a primary process;  
3 monitoring a fault-tolerance value corresponding to the primary process; and  
4 setting a number of duplicate processes equal to the fault-tolerance value.

1 21. (Currently Amended) The medium of claim ~~[[1]]~~ 17 wherein the managing element  
2 includes permitting only one of the processes to transmit to an external environment.

1 22. (Currently Amended) A system for memory failure recovery in a computer, comprising:  
2 means for maintaining a predetermined number of duplicate and primary processes in the  
3 computer;  
4 means for keeping the processes in synchronization;  
5 means for managing the processes so that a single process image is presented to an  
6 external environment;  
7 means for detecting a computer ~~system~~ exception which affects one of the processes; and  
8 means for terminating the affected process.

1    23.    (Original) A system for memory failure recovery, comprising:  
2            a primary process memory space hosting a primary process;  
3            a duplicate process memory space hosting a duplicate process corresponding to the  
4 primary process;  
5            a synchronization buffer for keeping the duplicate process in synchronization with the  
6 primary process;  
7            a processor for generating an exception signal in response to detection of a memory  
8 failure condition which affects the primary process; and  
9            an operating system for receiving the exception signal, terminating the affected primary  
10 process, and maintaining a predetermined number of primary and duplicate processes.

1    24.    (Currently Amended) The system of claim 23, further comprising:  
2            a buffer controller for permitting the processes to receive communications from an  
3 external environment while permitting only one of the processes to transmit to the external  
4 environment.

1    25.    (Original) The system of claim 23, wherein the exception signal is a machine check abort  
2 signal.

1    26.    (New) The method of claim 1, further comprising:  
2            the processes communicating, through a synchronization buffer, with an external  
3 environment,  
4            wherein keeping the processes in synchronization is based on interaction between the  
5 processes and the external environment through the synchronization buffer.

1    27.    (New) The method of claim 15, wherein keeping the processes in synchronization is  
2 based on data or signals received from the external environment, the external environment  
3 including computer functionality outside the processes.

- 1 28. (New) The method of claim 15, wherein the predetermined number of duplicate and  
2 primary processes are maintained in a computer.
- 1 29. (New) The medium of claim 17, wherein the computer program code is for commanding  
2 the computer to further perform:  
3 enabling the processes to communicate, through a synchronization buffer, with an  
4 external environment,  
5 wherein keeping the processes in synchronization is based on interaction between the  
6 processes and the external environment through the synchronization buffer.
- 1 30. (New) The system of claim 23, wherein the primary process, duplicate process,  
2 synchronization buffer, processor, and operating system are part of a computer.